

No.

9500285



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Colorado Wheat Research Foundation, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR CHECKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF COMMON SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Halt'

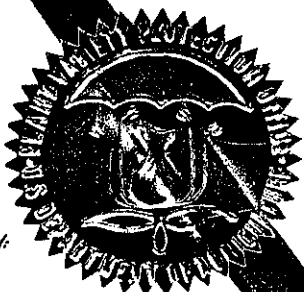
In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-eighth day of June in the year of our Lord one thousand nine hundred and ninety-six.

Attest:

Marsla A. Hunter

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Jan Filutowicz
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
COLORADO STATE UNIVERSITY <i>Wheat Research Foundation, Inc.</i> <i>MAS 6-21-96</i>		CO 910927	Halt
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9500285 DATE <i>Aug 28, 1995</i> FILING AND EXAMINATION FEE \$ <i>2450.00</i> DATE <i>Aug 28, 1995</i> CERTIFICATION FEE \$ <i>300.00</i> DATE <i>2-21-96</i>
Department of Soil and Crop Sciences Colorado State University Fort Collins, CO 80523		970-491-6483	
6. FAX (include area code)			
970-491-0564			
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Botanical)		
Triticum aestivum L.	Graminae		
9. CROP KIND NAME (Common name)			
Wheat, common			
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)			
COLORADO STATE UNIVERSITY			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			14. TELEPHONE (include area code)
James S. Quick Department of Soil and Crop Sciences Colorado State University Fort Collins, CO 80523			970-491-6483
			15. FAX (include area code)
			970-491-0564
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)?			
<input checked="" type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <input type="checkbox"/> NO (If "no," go to item 20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?			
<input checked="" type="checkbox"/> YES (If "yes," give names of countries and dates) <input type="checkbox"/> NO <i>U.S.A. - 16 AUG '94</i>			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.			
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.			
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))		SIGNATURE OF APPLICANT (Owner(s))	
<i>James S. Quick</i>			
NAME (Please print or type)		NAME (Please print or type)	
JAMES S. Quick			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Professor	15 Aug 95		

EXHIBIT A - BREEDING HISTORY

Geneology - Halt, PI 584505, was selected from the crosses Sumner/CO820026, F₁//PI 372129, F₁/3/'TAM107' which were made in 1986, 1987, and 1988. Sumner is an unreleased line made available in 1986 by the Kansas Agricultural Experiment Station and CO820026 is a Colorado line derived from the cross 'Siete Cerros'/'Ciano 67'/'Calidad'/3/'Baca'/4/'Vona'. PI 372129 is a Russian wheat aphid-resistant accession.

The breeding method used was a modified pedigree method. The final cross was made in 1988. The F₁ was increased in the greenhouse in 1988. Halt was tested as an F₂-derived line in the F₄ through F₆ generations. Simultaneously, 20 plants with white glume color were selected and bulked in the F₆ generation. This bulk was tested as CO910927 (RWAE5W) and was the source of breeder seed. Halt has been tested in Colorado yield nurseries since 1991, and in the Southern Regional Performance Nursery in 1994. Approximately 80 pounds of breeder seed were produced in 1993. The breeders seed was planted under irrigation in 1993 and approximately 125 bushels of foundation seed was harvested in 1994. Halt was entered in the small scale milling and baking trials and evaluated by the Hard Wheat Quality Advisory Committee in January 1994 and 1995. The cultivar was named and released in August 1994, and the foundation seed distributed to seed producers in September 1994.

Under an isolated reproduction system the cultivar Halt has no known variants. Halt has been observed in field tests for five generations and is stable to the best of our knowledge with respect to genetic change caused by mutations or heterozygosity.

EXHIBIT B - STATEMENT OF DISTINCTNESS

Halt was released because of its resistance to the Russian wheat aphid (RWA) (Diuraphis noxia, Mordvilko), and is the first RWA-resistant cultivar developed in the USA, and the only one released to date. The level of resistance is similar to that in PI 372129. Resistance to RWA in Halt is a qualitative trait and is conditioned by the gene Dn4.

'Halt' is most similar to 'Yuma', which is not resistant to RWA. AAA (per letter) 26 Jan/1996.

26 JAN 1996

0201 1996

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
COMMODITIES SCIENTIFIC SUPPORT DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

COLORADO STATE UNIVERSITY

FOR OFFICIAL USE ONLY

PVPO NUMBER 9500285

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

DEPARTMENT OF SOIL AND CROP SCIENCES
COLORADO STATE UNIVERSITY
FORT COLLINS, CO 80523

VARIETY NAME OR TEMPORARY DESIGNATION

HALT

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., 089 or 09) when number is either 99 or less or 9 or less.

1. KIND:

☒ 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

☒ 1 = SPRING 2 = WINTER 3 = OTHER (Specify) _____ ☒ 1 = SOFT 3 = OTHER (Specify) _____
2 = HARD _____

☒ 1 = WHITE 2 = RED 3 = OTHER (Specify) _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

☒ 250 FIRST FLOWERING ☒ 256 LAST FLOWERING

4. MATURITY (50% Flowering):

☒ 04 NO. OF DAYS EARLIER THAN ☒ 1 = ARTHUR 2 = SCOUT 3 = CHRIS
☐ NO. OF DAYS LATER THAN ☐ 4 = LEMHI 5 = HUGAINES 6 = LEEDS

5. PLANT HEIGHT (From soil level to top of head):

☒ 086 CM. HIGH
☐ CM. TALLER THAN ☐
☒ 18 CM. SHORTER THAN ☒ 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = HUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

☒ 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

☒ 1 = YELLOW 2 = PURPLE

8. STEM:

☒ Anthocyanin: 1 = ABSENT 2 = PRESENT
☒ Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
☒ 05 NO. OF NODES (Originating from node above ground)
☒ 2 Waxy bloom: 1 = ABSENT 2 = PRESENT
☒ Internodes: 1 = HOLLOW 2 = SOLID
☒ 23 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

☒ Anthocyanin: 1 = ABSENT 2 = PRESENT
☒ Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

☒ Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify) _____ ☒ Flag leaf: 1 = NOT TWISTED 2 = TWISTED
☒ Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
☒ 18 MM. LEAF WIDTH (First leaf below flag leaf) ☒ 26 CM. LEAF LENGTH (First leaf below flag leaf)

9500285

11. HEAD:

☒ 1 Density: 1 = LAX 2 = DENSE☒ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) _____☒ 4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED☒ 1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify) _____☐ 7 CM. LENGTH☐ 10 MM. WIDTH

12. GLUMES AT MATURITY:

☒ 2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
3 = LONG (CA. 9 mm.)☒ 2 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)☒ 2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
4 = SQUARE 5 = ELEVATED 6 = APICULATE☒ 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☒ 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☒ 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☒ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☒ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL☒ 1 Check: 1 = ROUNDED 2 = ANGULAR☒ 1 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG☒ 1 Brush: 1 = NOT COLLARED 2 = COLLARED☒ 4 Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN
4 = BROWN 5 = BLACK☒ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE
5 = OTHER (Specify) _____☐ 06 MM. LENGTH☐ 03 MM. WIDTH☐ 35 GM. PER 1000 SEEDS

17. SEED CREASE:

☒ 3 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'☒ 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 35% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☒ 2 STEM RUST (Race) mixture☒ 1 LEAF RUST (Race) mixture☐ 0 STRIPE RUST (Race) _____☐ 0 LOOSE SMUT☒ 1 POWDERY MILDEW☒ 1 BUNT☐ 0 OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY☐ 0 APHID (Bydr.)☐ 0 GREEN BUG☐ 0 CEREAL LEAF BEETLE☒ 2 OTHER (Specify) R. Wheat Aphid

HESSIAN FLY

RACES:

☐ 0 GP☐ 0 A☐ 0 B☐ 0 C☐ 0 D☐ 0 E☐ 0 F☐ 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	<u>Yuma 12.1W 82 9W 56</u>	Seed size	<u>Yuma</u>
Leaf size	<u>Yuma</u>	Seed shape	<u>Yuma</u>
Leaf color	<u>Yuma</u>	Coleoptile elongation	<u>Yuma</u>
Leaf carriage	<u>Yuma 001d-SW-V050</u>	Yellow pigmentation	<u>Yuma</u>

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Driggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

EXHIBIT D - ADDITIONAL DESCRIPTION

The cultivar Halt has been released because of its RWA resistance and its performance data in Colorado tests. In two years of testing in the Colorado Variety Trial (12 location-years), Halt's grain yield (2765 kg ha⁻¹) was 5% lower than TAM107, the predominant cultivar in Colorado. In the Southern Regional Performance Nursery in 1994, Halt was 7, 3, 8, and 9% lower than TAM107 in Kansas, Nebraska, Oklahoma, and Texas, respectively, and 5% higher than TAM107 in Colorado. Halt has not been tested under irrigation. Halt is a semidwarf cultivar equal in height to 'Yuma' and TAM107 and 15 cm shorter than 'Lamar', a conventional height wheat. Halt has a shorter coleoptile (85 mm) than TAM107 (95 mm). Halt is recommended only for areas where RWA is a significant threat because of its lower grain yield and limited testing.

The grain volume weight of Halt is similar to TAM107 and Yuma and less than Lamar. The winterhardiness of Halt is adequate for Colorado growing conditions, and is intermediate between Yuma and TAM107. Halt is an early cultivar, similar in anthesis date to TAM107 and 2 d earlier than Yuma. The straw strength of Halt is less than TAM107, equal to Yuma, and more than Lamar, and should be adequate for Colorado dryland conditions. Halt is moderately susceptible to the prevalent races of leaf rust (incited by Puccinia recondita Roberge ex Desmaz.) and resistant to prevalent races of stem rust (incited by P. graminis Pers.:Pers.). Based on field observations for incidence of wheat streak mosaic virus, Halt is moderately resistant, intermediate between TAM 107 and Lamar.

Based on composite samples from several Colorado locations, the wheat and flour protein content of Halt is similar to Lamar and higher than TAM107. Halt has strong mixing characteristics as determined by the mixograph. In Colorado and regional milling and baking tests, Halt has been superior in overall bread-making quality to Lamar, Yuma, and TAM107. The kernels of Halt have been classified by the Federal Grain Inspection Service as hard red winter wheat.

EXHIBIT E - OWNERSHIP

The applicant is the breeder of the cultivar Halt, and is an employee of Colorado State University, the developer of the cultivar Halt. Ownership of the cultivar has been transferred to the Colorado Wheat Research Foundation, 5500 S. Quebec St. Suite 111, Englewood, CO 80111.

Superseded by later
version, 7. V. AAA 26 Jan 1996

Information for 'Halt'

1. Halt was officially released by signature of the Director of the Agricultural Experiment Station on August 16, 1994 (copy enclosed) and public information of the release was distributed on November 18, 1994. I filed the application for Halt on August 15, 1995 so I consider Halt eligible for protection. In actuality, Halt was not released to the public until August 1, 1995 since only five seed growers obtained seed under a special seed multiplication agreement in 1994. I do not know when the application reached your office because I was on leave at CIMMYT in Mexico. ✓

2. Novelty of Halt: The clear difference between Halt and all other cultivars is resistance to the Russian wheat aphid (RWA). Your database needs an identifier for RWA resistance. I have attached a copy of a Crop Science paper describing the qualitative RWA resistance in PI 372129 which was transferred to Halt (31:905-7). ✓

3. Exhibit A - Breeding history: Calidad and Siete Cerros are cultivars developed by CIMMYT and Mexico and released in Mexico. More than 20 selection criteria were used in the development of Halt, the major ones being: early maturity, red grain, hard endosperm, RWA resistance, semidwarf height, wheat streak mosaic resistance, and winter hardiness.

4. Exhibit B - Novelty: see item 2. How can a cultivar be more novel than being the only one with RWA resistance?

5. Exhibit E - Ownership: the following revised statement is provided: "The cultivar Halt, for which Plant Variety Protection is hereby sought, was developed by a CSU team led by Dr. James S. Quick, an employee of Colorado State University (CSU). By agreement between Dr. Quick and CSU, all rights to all cultivars developed by him while employed by CSU were assigned to CSU."

6. Milling & Baking Data: Milling and baking data are provided in a table as requested. ✓

Wheat Quality Comparisons 1990-1993

	Flour		Dough*	Loaf**		Overall
	% Protein	% H ₂ O Abs.	Mix Time	Volume	Crumb Grain	Baking Score
1993 Wheat Quality Council						
AKRON	11.5	3.4	4.0	2.8	3.4	3.1
HALT	12.2	3.4	3.5	3.8	3.2	3.3
TAM 107	11.0	3.7	3.0	2.7	2.2	2.1
Lamar	12.4	3.7	3.4	2.6	2.8	2.9

1992 Wheat Quality Council

		***		***	***	***
AKRON	11.8	3.0	3.5	3.5	2.9	3.1
Jules	11.1	3.1	3.4	3.0	2.9	3.0
TAM 107	11.3	3.4	2.8	3.1	2.2	2.3
Lamar	12.4	3.6	3.3	3.6	2.8	3.1

1991 CSU Lab - Akron Seed

AKRON	9.3	-	4.1	805	2.6	-
Jules	11.7	-	4.2	840	2.2	-
TAM 107	9.6	-	2.9	795	2.4	-
Yuma	12.2	-	4.9	820	2.4	-
Lamar	11.0	-	4.0	845	2.6	-

- * Dough mix time is time to curve peak on mixograph.
 ** Loaf volume is in cubic centimeters; crumb grain is 1 to 6 score.
 *** 1 to 6 score, 6 = superior

1993 CSU Lab - 3 Locations

Location	Variety	H2O Absorp.	Vol.	Bread Grain	Tex.	Mix Time
F Coll.	Lamar	64	680	VG	VG	3.4
"	TAM 107	64	680	G+	G+	3.0
"	HALT	64	730	VG	Ex	2.5
Akron	Lamar	64	855	G-	Ex	3.1
"	TAM 107	64	820	G-	VG	3.2
"	HALT	64	1000	G-	Ex	2.6
Burl.	Lamar	64	810	G	Ex	3.0
"	TAM 107	64	755	G	VG	3.0
"	HALT	64	825	G-	VG	2.2

Department of Soil and Crop Sciences
Fort Collins, Colorado 80523-1170
(970) 491-6517
FAX: (970) 491-0564

March 22, 1996

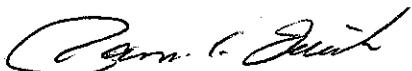
Dr. Alan A. Atchley
Plant Variety Protection Office
NAL Building, Room 500
10301 Baltimore Blvd.
Beltsville, MD 20705-2351

Dear Dr. Atchley:

SUBJECT: PVP Application No. 9500285, Wheat 'Halt'

Thank you for your March 21 fax requesting a corrected Exhibit E which reflects true ownership for the variety Halt. The statement is provided below. The PVP certificate should be ordered in the name of the owner of the variety, Colorado Wheat Research Foundation, Inc. Thanks for your consideration.

Sincerely,



James S. Quick
Professor

Exhibit E - Ownership: The cultivar Halt, for which Plant Variety Protection is hereby sought, was developed by a CSU team led by Dr. James S. Quick, an employee of Colorado State University (CSU). By agreement between Dr. Quick and CSU, all rights to all cultivars developed by him while employed by CSU were assigned to CSU. Ownership of the cultivar Halt has been transferred from CSU to the Colorado Wheat Research Foundation, Inc., 5500 S. Quebec St., Suite 111, Englewood, CO 80111.